



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,702	03/09/2004	Johann F. Petersen	58999US003	2885
32692	7590	08/12/2008	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				WOLLSCHLAGER, JEFFREY MICHAEL
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE		DELIVERY MODE		
08/12/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com  
LegalDocketing@mmm.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/796,702	PETERSEN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	JEFFREY WOLLSCHLAGER	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 June 2008.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-3,6-14,16,17,19-27 and 34 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3,6-14,16,17,19-27 and 34 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 6, 2008 has been entered.

### ***Response to Amendment***

Applicant's amendment to the claims filed June 6, 2008 has been entered. Claims 1 and 2 are currently amended. Claims 4, 5, 15, 18, and 28-33 have been canceled. Claims 1-3, 6-14, 16, 17, 19-27 and 34 are pending and under examination.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 6 and 7 recite that they depend from claim 5. However, claim 5 has been canceled. Claims 8-14 are rejected as dependent claims which depend from rejected claim 7. For the purposes of examination, claims 6 and 7 are understood to depend from claim 1 as this appears to be the interpretation most consistent with the prosecution history.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 6-14, 16, 17, 19-26 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buzzell et al. (US 6,582,642), which incorporates Kennedy et al. (US 5,260,015) into the disclosure by reference, and further in view of Shepard et al. (US 6,342,285).

Regarding claim 1, Buzzell et al. teach a process of producing stretched fasteners comprising providing a fibrous web layer (Figure 13 and Figure 13a) for employment as the loop member in a hook and loop fastener (col. 14, line 60 - col. 15, line 27); passing the fibrous web layer through the nip formed by two rolls, one of them (14) having cavities that are negatives of a plurality of male fastening elements (Figure 13 and Figure 13a); introducing a molten thermoplastic (col. 2, lines 40-55) resin (20) into the cavities in excess of amount that would fill the cavities which excess forms the web layer (Figure 13a); allowing the resin to at least partially solidify and stripping of the laminate from the roll (Figure 13); stretching the precursor

web laminate (Figures 1 and 2; Abstract) either monoaxially or biaxially (col. 11, line 4-col. 12, line 8) to produce a fastener for the intended application (col. 10, lines 50-67). Additionally, Buzzell et al. incorporate Kennedy et al. into their disclosure by reference at col. 15, line 5. Kennedy et al. teach a method of producing laminated hook fastener products wherein they teach that woven or knitted materials (Figure 8; col. 6, lines 38-41) or non-woven materials (Figure 5; col. 5, lines 50-64) may be employed, as desired, to create a laminated article that is capable of engaging into hooks or that can receive other bonding agents (col. 3, lines 5-14). Further, Kennedy et al. suggest optimizing the weight and thickness of the nonwoven layer (col. 5, lines 50-64). Buzzell et al. do suggest the fibrous material employed to form the laminate (Figure 13a) functions as loops in a hook and loop fastener (col. 15, lines 23-27), but do not teach or suggest that employment of a nonwoven fibrous material that is in continuous contact with the thermoplastic web layer (i.e. a nonwoven fibrous material that is not pre-compressed) is employed. However, Shepard et al. teach a method of providing a nonwoven, uncompressed fastener loop material that is less expensive than conventional loop fabrics (col. 1, lines 24-36) that can be stabilized in a stretched condition (col. 1, lines 58-66; col. 5, lines 8-26; col. 17, lines 31-46).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Buzzell et al. and to have employed a nonwoven, uncompressed, stretchable, fibrous loop material, as the fabric layer of Buzzell et al., as suggested by Shepard et al., for the purpose, as suggested by Shepard et al. of providing stretchable loop material that is less expensive than conventional loop fabrics. The examiner submits that in the combination with Buzzell et al., the uncompressed, nonwoven loop material fed between the rolls (14) and (16) is in continuous contact with the layer of

thermoplastic resin (e.g. compare Figure 13 of Buzzell et al. with Figures 1a and 2 of the original disclosure).

The examiner recognizes that Buzzell et al. do not expressly recite all the claimed physical properties and effects. However, the combination employs the same claimed materials and performs the same claimed steps in the same claimed manner. As such, the examiner submits that the same claimed effects and physical properties are intrinsically achieved by the practice of the combined method (e.g. decreasing basis weight to a weight of less than 100 g/m<sup>2</sup>). For example, the examiner notes that the nonwoven material of Shepard has a basis weight of about 2 ounces/sq. yard (about 67 g/m<sup>2</sup>) or less (col. 1, lines 29-39; col. 7, lines 17-19) and that Shepard identifies stretching as a result effective variable that is selected to reduce the weight of the final product (col. 15, line 65-col. 16, line 4) and the cost of the final product (col. 7, lines 17-19). Additionally, Buzzell et al. teach the thickness of the web is reduced to a thickness as low as about 0.001 inches (col. 13, lines 26-36) (i.e. about 25 um) which is within the range set forth by the instant disclosure (US 2005/0202205; paragraphs [0062] and [0082]).

As to claim 3, Buzzell et al. teach preheating the fastener and heating after stretching (Figure 1 and Figure 2).

As to claim 6, Shepard et al. bond carded webs (Figures 8 and 9) to produce the nonwoven layer of loop material (col. 12, lines 29-46). It would have been obvious to one having ordinary skill in the art to have produced the nonwoven material in the manner as suggested by Shepard et al. in the method of Buzzell et al. for the purpose of reducing the cost of the manufacturing process while still providing a suitable loop material.

As to claim 7, the Shepard et al. employ fibers to produce the nonwoven material (Abstract), including nylon and polyester fibers (col. 2, lines 16-22). It would have been obvious to one having ordinary skill in the art to have employed the loop materials as suggested by

Shepard et al. in the method of Buzzell et al. for the purpose of reducing the cost of the manufacturing process while still providing a suitable loop material.

As to claim 8, Shepard et al. suggest controlling and optimizing the diameter and properties of the fibers as required (col.2, lines 1-5; col. 3, lines 27-55; col. 7, lines 34-60).

As to claim 9, Buzzell et al. teach fastener elements having densities in the range of 200-2000 per sq. inch and further teach optimizing the density depending upon the desired final use of the fastener (col. 8, lines 40-65).

As to claim 10, Buzzell et al. teach the thickness of the resin layer is as low as 0.001 inches (about 25 um) and suggest optimizing the thickness as required to impart the required stretchiness (col. 13, lines 26-35).

As to claim 11, Buzzell et al. teach polyethylene, polyesters, and nylon are suitable thermoplastic resins (col. 2, lines 40-55).

As to claims 12-14, Buzzell et al. teach the male elements comprise a stem projecting from the surface of the web layer that includes an enlarged section, such as a J-hook, (Figures 5 – 6B; Figures 7, 7a-7d, 8 and 13a).

As to claims 16 and 17, Buzzell et al. teach biaxially stretching the material to the extent required (col. 11, line 12 -col. 12, line 8; Figure 1 and 2; Figure 12) including stretch ratios ranging from 2-8 (col. 8, lines 4-41).

As to claim 19, Buzzell et al. employ a tenter apparatus (Figure 1 and Figure 2).

As to claims 20 and 21, Shepard et al. suggest the weight of the nonwoven material is about 2 ounces/sq. yard (col. 1, lines 29-39) or less (col. 7, lines 17-19) (i.e. 67 g/m<sup>2</sup> or less). In the combination, this material is stretched to produce the desired hook and loop fastener. Additionally, Shepard et al. suggest that the density of the material is a result effective variable that impacts the cost and weight of the final product. As such, one having ordinary skill would

have readily optimized the final density of the loop portion of the fastener material to economically yield a product having the desired properties. Further, Buzzell et al. teach stretch ratios ranging from 2-8 (col. 8, lines 4-41).

As to claims 22 and 23, Buzzell et al. suggest a web having a thickness of about 0.001 inches (about 25 um) and teach stretch ratios ranging from 2-8 (col. 8, lines 4-41; col. 11, line 12-col. 12, line 8).

As to claims 24 and 25, Buzzell et al. teach fastener elements having densities in the range of 200-2000 per sq. inch and further teach optimizing the density depending upon the desired final use of the fastener (col. 8, lines 40-65).

As to claim 26, the combination employs the same claimed materials to practice the same claimed method in the same claimed manner. Accordingly, the same claimed physical properties and effects (e.g. tensile strength in the machine direction) would intrinsically be realized by the practice of the combined method.

As to claim 34, Shepard et al. teach the weight of the material is about 2 ounces/sq. yard (col. 1, lines 29-39) or less (col. 7, lines 17-19) (i.e. 67 g/m<sup>2</sup> or less).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buzzell et al. (US 6,582,642), which incorporates Kennedy et al. (US 5,260,015) into the disclosure by reference, and further in view of Shepard et al. (US 6,342,285) and de Navas Albareda (US 4,056,593).

Regarding claim 2, Buzzell et al. teach a process of producing stretched fasteners comprising providing a fibrous web layer (Figure 13 and Figure 13a) for employment as the loop member in a hook and loop fastener (col. 14, line 60 - col. 15, line 27); passing the fibrous web layer through the nip formed by two rolls, one of them (14) having cavities that are negatives of a plurality of male fastening elements (Figure 13 and Figure 13a); introducing a molten

thermoplastic resin (20) into the cavities into the in excess amount that would fill the cavities which excess forms the web layer (Figure 13a); allowing the resin to at least partially solidify and stripping of the laminate from the roll (Figure 13); stretching the precursor web laminate (Figures 1 and 2; Abstract) either monoaxially or biaxially (col. 11, line 4-col. 12, line 8) for the intended applications (col. 10, lines 50-67). Additionally, Buzzell et al. incorporate Kennedy et al. into their disclosure by reference at col. 15, line 5. Kennedy et al. teach a method of producing laminated hook fastener products wherein they teach that woven or knitted materials (Figure 8; col. 6, lines 38-41) or non-woven materials (Figure 5; col. 5, lines 50-64) may be employed, as desired, to create a laminated article that is capable of engaging into hooks or that can receive other bonding agents (col. 3, lines 5-14). Further, Kennedy et al. suggest optimizing the weight and thickness of the nonwoven layer (col. 5, lines 50-64). Buzzell et al. do suggest the fibrous material employed to form the laminate (Figure 13a) functions as loops in a hook and loop fastener (col. 15, lines 23-27), but do not teach or suggest that employment of a nonwoven fibrous material that is in continuous contact with the thermoplastic web layer (i.e. a nonwoven fibrous material that is not pre-compressed) is employed. Buzzell et al. also do not teach cutting the precursor laminate in the cross-directions as claimed. However, Shepard et al. teach a method of providing a nonwoven, uncompressed fastener loop material that is less expensive than conventional loop fabrics (col. 1, lines 24-36) that can be stabilized in a stretched conditions (col. 1, lines 58-66; col. 5, lines 8-26; col. 17, lines 31-46) and de Navas Albareda teaches cutting a precursor fastener web in the cross-direction (Figure 1 and Figure 3).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Buzzell et al. and to have employed a nonwoven, uncompressed, stretchable, fibrous loop material, as suggested by

Shepard et al., for the purpose, as suggested by Shepard et al. of providing stretchable loop material that is less expensive than conventional loop fabrics. The examiner submits that in the combination with Buzzell et al., the uncompressed, nonwoven loop material fed between the rolls (14) and (16) is reasonably understood to be in continuous contact with the layer of thermoplastic resin (e.g. compare Figure 13 of Buzzell et al. with Figures 1a and 2 in the instant application). Additionally, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Buzzell et al. and to have cut the web in the cross-direction, as taught by de Navas Albareda because de Navas Albareda suggest that such cutting (and extruding of rib structures) is an equivalent and alternative means of forming fastener products.

The examiner recognizes that Buzzell et al. do not expressly state all the claimed physical properties and effects. However, the combination employs the same claimed materials and performs the same claimed steps in the same claimed manner. As such, the examiner submits that the same claimed effects and physical properties are intrinsically achieved by the practice of the combined method (e.g. decreasing basis weight to a weight of less than 100 g/m<sup>2</sup>). For example, the examiner notes that the nonwoven material of Shepard has a basis weight of about 2 ounces/sq. yard (about 67 g/m<sup>2</sup>) and that Shepard identifies stretching as a result effective variable that is selected to reduce the weight of the final product (col. 15, line 65-col. 16, line 4). Additionally, Buzzell et al. teach the thickness of the web is reduced to a thickness as low as about 0.001 inches (col. 13, lines 26-36) (i.e. about as low as 25 um) which is within the range set forth by the instant disclosure (US 2005/0202205; paragraphs [0062] and [0082]).

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buzzell et al. (US 6,582,642), which incorporates Kennedy et al. (US 5,260,015) into the disclosure by reference, and further in view of Shepard et al. (US 6,342,285), as applied to claims 1, 3, 6-14, 16, 17, 19-26 and 34 above, and further in view of de Navas Albareda (US 4,056,593).

As to claim 27, the combination teaches the method set forth above. Buzzell et al. do not teach cutting the precursor laminate in the cross-directions as claimed. However, de Navas Albareda teaches cutting a precursor fastener web in the cross-direction (Figure 1 and Figure 3).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Buzzell et al. and to have cut the web in the cross-direction, as taught by de Navas Albareda because de Navas Albareda suggest that such cutting (and extruding of rib structures) is an equivalent and alternative means of forming fastener products.

#### ***Response to Arguments***

Applicant's arguments filed June 6, 2008 have been fully considered. However, to the extent the arguments are still applicable to the rejection set forth above, they are not persuasive. Applicant's arguments are essentially directed to the pre-compressed material set forth by Buzzell et al. and how application of a nonwoven fabric that is in continuous contact with the resin layer would destroy the loop function of the material since such a nonwoven material would be completely non-functional as a loop material. This argument is not persuasive in view of the new combination of Buzzell et al. (which includes the full disclosure of Kennedy et al.) in view of Shepard et al. as set forth above. Shepard et al. provide a nonwoven material that is uncompressed and is stretchable. In the combination, a stretched product that

Art Unit: 1791

has hook fasteners on one side and nonwoven loop fasteners on the other is reasonably produced. Applicant argues that de Navas Albareda does not correct the argued deficiencies. This argument is not persuasive. As set forth in the rejection above, the examiner submits that the de Navas Albareda reference has not been applied to address the argued deficiency. Further, the examiner submits that the new combination with Shepard et al. teaches and suggests each and every limitation of the claims. Applicant's other arguments are moot in view of the new grounds of rejection necessitated by the amendment to the claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY WOLLSCHLAGER whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 1791

/Jeff Wollschlager/  
Examiner, Art Unit 1791

August 8, 2008